

Air Quality Event Summary

June 27, 2005

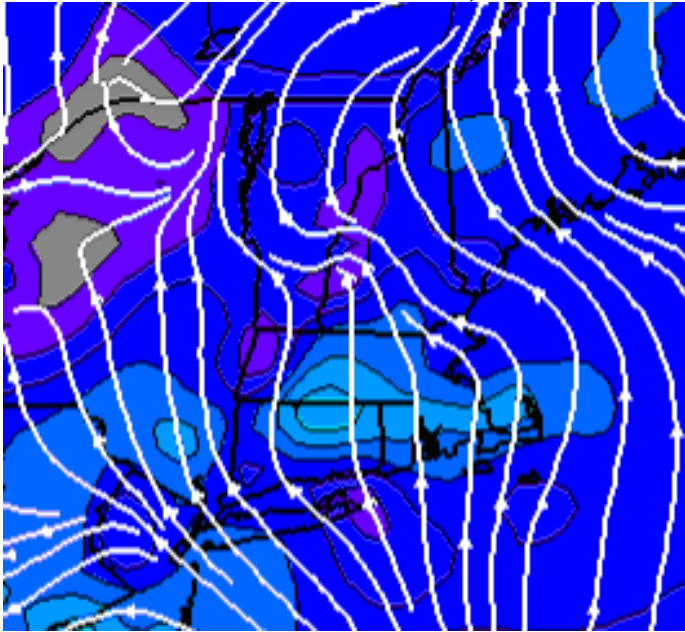
The first official day of unhealthy air quality for 2005 occurred on June 27th as temperatures reached the high 80s across the state and skies were clear for a good part of the day. Light south-easterly winds were in evidence for most of the afternoon and evening hours, which is not a common direction for unhealthy air quality. However, both PM_{2.5} and ozone levels were elevated across much of the state and Nashua recorded an exceedance of the 8-hour ozone standard with a maximum concentration of 96 ug/m³. The 8-hour ozone standard is 85 ug/m³.

The table below shows the highest ozone and particle pollution (PM_{2.5}) concentrations for the June 27th event. Further below are afternoon streamlines for the day, along with maximum 8-hour ozone levels. The map of the ozone distribution shows that this was a very localized exceedance. The previous day saw numerous exceedances of the ozone standard south of the New Hampshire border, and southwest winds were occurring over most of the area. Overnight on the 26th the wind shifted to the southeast, bringing cleaner marine air into the region and generally dropping ozone levels significantly. However, as can be seen from the streamline analysis, this wind direction brought emissions from the Boston metropolitan area into Hillsborough County, contributing greatly to the exceedance. Though emissions from the Boston area frequently make their way into the southern part of the state, the persistence of the wind (14 consecutive hours of a south-easterly flow on the 27th) resulted in a build-up of ozone and its precursors.

Maximum Ozone and PM_{2.5} Concentrations June 27, 2005

Ozone			Particle Pollution (PM _{2.5})		
monitor	1-hr avg.	8-hr avg.	monitor	1-hr avg.	24-hr avg.
	max ppb	max ppb		max ug3	max ug3
Manchester	101	81	Manchester	64	39
Keene	77	68	Portsmouth	58	
Rye	46	40	Miller	40	24
Claremont	84	62	Lebanon	49	30
Nashua	105	96	Camp Dodge	28	17
Concord	87	75	<i>no 1-hour standard</i> <i>24-hr exceedance</i> <i>is > 65.5 ug/m3</i>		
Portsmouth	57	54			
Miller	95	81			
Laconia	63	57			
Mt Washington	83	72			
Lebanon	72	56			
Camp Dodge	52	47			
Pittsburg	46	38			
<i>1-hr exceedance is > 124ppb</i>					
<i>8-hr exceedance is > 84 ppb</i>					

Streamlines for June 27, 2005



Maximum 8-Hour Ozone for June 27, 2005

